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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,242	03/08/2001	Jonathan Andrew Thompson	ASPN 1001-1	1409
22470	7590	10/28/2004	EXAMINER	
HAYNES BEFFEL & WOLFELD LLP			NGUYEN, ALAN V	
P O BOX 366			ART UNIT	
HALF MOON BAY, CA 94019			PAPER NUMBER	
			2662	

DATE MAILED: 10/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/802,242

Applicant(s)

THOMPSON ET AL.

Examiner

Alan Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-15 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/20/01 12/26/01</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Drawings*

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application. The drawings are hand-drawn and should be revised through a graphics editor. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-9, and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mattathil (US 6,674,749) in view of Davidson et al (US 6,483,820) hereafter Davidson.

Regarding **claims 1-3, 7, 9, 11-15** Mattathil discloses a bandwidth transfer switching system and computer logic for implementing said system for routing packets and voice calls in figure 7. This corresponds to the telecommunications system of the application, which shows routing data packets and voice calls between a network (WAN 64) and a subscriber terminal (access concentrator, AC, 104; serves as a terminating

node) of the telecommunications system, the subscriber terminal being connectable to a central terminal (remote concentrator, RC, 106; serves as a distributing node) of the telecommunications system, the telecommunications system providing multiple communication channels (T1/E1/xDSL) arranged to utilize for the transmission of signals to and from the subscriber terminal, and a number of said communication channels being formed as a packet group for transmission of data packets to and from the subscriber terminal (traffic is transferred from the network to access concentrator 104 which in turn deliver to the LAN and network devices; see column 7 lines 30-35). In order to implement Mattathil's embodiment, it is inherent that a computer readable medium is utilized to control the switching and managing functions.

In the invention described by Mattathil, a transfer switch 108 in the system of figure 7 serves as a central node and distributes, manages, and controls packet and circuit channels to access concentrators 104, which serves as a terminating node. The transfer switch 108 equates to the packet controller connectable to the network and arranged to control the transmission of data packets to the subscriber terminal over the communication channels of the packet group. Access concentrator 104 equates to the subscriber terminal;

Mattathil discloses the AC 104 coupled to various network devices such as computers, telephones, fax machines, modems and video devices. AC 104 must have modulation/demodulation means coupled to each of these devices in order to transmit data and voice. The modulation/demodulation means of Mattathil correspond to the communications units within the subscriber terminal of the application to enable the

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subscriber terminal to transmit and receive signals over a corresponding plurality of the multiple communication channels;

Mattathil discloses that AC 104 has the ability to monitor the traffic on both customer side and network side and transfers traffic accordingly. The modulation/demodulation means in AC 104 of Mattathil must be able to monitor all channels in order to rout appropriate signals to its respective destination. See column 7 lines 30-41. Therefore AC 104 has means to correspond to the subscriber controller, and when no voice call is being made, to cause the plurality of communications units to monitor a corresponding plurality of the communication channels of the packet group. Mattathil also discloses that AC 104 uses a control channel to communicate with transfer switch 108 co that the correct status of each network node can be maintained accurately. See column 7 lines 63-67. This equates to the subscriber controller being further arranged to issue a channels message to the packet controller identifying the communication channels within the packet group being monitored;

Mattathil discloses that AC 104 has the ability to monitor the traffic on both customer side and network side and transfers traffic accordingly. It is understood that if a voice call is placed to a network device that connected to AC 104, AC 104 must have the correct modulated signals for the telephone to function. This equates to the step of assigning one of the plurality of communications units to the voice call, reducing the number of communications units available to monitor the communication channels of the packet group, the subscriber controller being arranged to re-issue the channels

message to the packet controller identifying the communication channels within the packet group being monitored.

Mattathil, however, fails to expressly disclose where the system is a wireless system and fails to expressly disclose specific 2-way messaging for allocation of communication channels between AC 104 and transfer switch 108.

Davidson discloses a system and method for dynamic radio resource allocation for voice and data communications. Davidson shows the communication terminals sending and receiving acknowledgement messages when requesting channel resources. See column 4 lines 12-34. Base station controller 105 and Mobile Switching center 40 go through a series of queries and acknowledgements when allocating signaling and traffic channels for the mobile subscribers.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mattathil's routing system to adapt to a wireless scheme where AC 104 is utilizing radio resources to communication with end devices and transfer switch 108, and to have a more reliable system through messaging and system confirmations, as taught by Davidson. The motivation is a trend in the art to keep pace with the ever-improving features of network communication systems by accommodating wireless technology and system integrity. Mattathil discloses seeking a more improved network model for his switching system in order to cater to the demands of the end user.

Regarding **claims 4 and 5** Mattathil discloses that the function of transfer switch 108 is one of data control and management. Transfer switch 108 and AC 104 must have an up-to-date knowledge of which channel is associated to which end device. This corresponds to the storage for maintaining a queue manager associated with each communication channel in the packet group.

Regarding **claim 8** Mattathil discloses modulation/demodulation means in order to relay data and voice to the computers, telephones, fax machines, and video devices. This corresponds to the communications units within the subscriber terminal of the application to enable the subscriber terminal to transmit and receive signals over a corresponding plurality of the multiple communication channels.

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mattathil in view of Davidson, and further in view of Brouwer (US 6,760,303).

Regarding **claim 10** Mattathil further fails to disclose where the information identifying the communication channels forming the packet group is distributed to the subscriber terminal over a broadcast communication channel.

Brouwer discloses wireless switching system that utilizes broadcast channels to convey information to other terminals. See column 9 lines 4-15.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Mattathil's system to broadcast messages and

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information to terminals throughout the system, as taught by Brouwer. The motivation is a more efficient and simpler system where messages can be sent out only once.

### ***Allowable Subject Matter***

4. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Regarding **claim 6** the cited references taken individually or in combination fails to particularly disclose the combination of where if the channels message from the subscriber controller specifies a reduced number of communication channels, the packet controller causes the queue manager to review the contents of the queues and to redistribute into an appropriate queue any data packets for the subscriber terminal placed in queues for communications channels no longer being monitored by the subscriber terminal.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to show the state of the art with respect to allocation on demand:

US Patent (6,594,241) to Malmlof

US Patent (6,608,838) to Ozluturk

US Patent (6,069,883) to Ejzak et al



US Patent (6,487,406) to Chang et al

US Patent (6,791,944) to Demetrescu et al

US Patent (6,466,544) to Sen et al

US Patent (6,671,511) to Forssell et al

US Patent (6,463,054) to Mazur et al


US Patent (6,594,238) to Wallentin et al

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Nguyen whose telephone number is 571-272-3089. The examiner can normally be reached on 9am-6pm ET, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AVN  
October 14, 2004



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